Overview
Lesotho & Botswana
Resources & Reserves
Mining operations
Liqhobong
BK11


Map of Lesotho

# Liqhobong

**Key Facts**

**Location:** The Kingdom of Lesotho

**Acquired:** September 2010

**Ownership:** Firestone Diamonds 75 per cent interest, 25 per cent interest held by the Government of the Kingdom of Lesotho

**Status**: Construction in progress. Initial production expected during Q4 2016.

- Liqhobong is a robust project with over 11 million carats in reserve. The total open pit resource contains over 17 million carats down to 393 metres;
- New plant designed at 500 tonnes per hour (twin stream 250 tonne) to yield 1 million carats per annum over 15 years life of mine; and
- Project fully funded subject to remaining conditions precedent.

**Project description**

The Liqhobong Diamond Mine ('Liqhobong' or the 'Project') in Lesotho is Firestone's principal asset, and was acquired as a result of the acquisition of Kopane Diamond Developments plc in September 2010. Liqhobong is located at the head of the Liqhobong Valley in the Maluti Mountains of northern Lesotho and is operated by Liqhobong Mining Development Company (Proprietary) Limited ('LMDC'), which is 75% owned by Firestone Diamonds and 25% owned by the Government of Lesotho.

Trial production commenced at Liqhobong following the commissioning of the pilot plant, from July 2011 until October 2013, which produced in excess of 325,000 carats. Through the operation of the pilot plant, the Company was able to confirm the quality, grade and size of stones present at Liqhobong, as well as understand the characteristics of the ore body.

The Company completed the definitive feasibility study ("DFS") for Liqhobong in October 2012 which set out the basis for an open pit mine with a 15 year life and a Main Treatment Plant ('MTP') capable of

## Liqhobong development history

**1950's**
Liqhobong discovered

**1990's**
First large scale evaluation programme undertaken on the Main Pipe

**2005-2010**
Production commenced at Satellite Pipe in 2005

Definitive Feasibility Study for development of Main Pipe commenced in 2007

Production suspended at Satellite Pipe in 2008

Acquired by Firestone Diamonds in 2010

**2011**
Production restarted by Firestone Diamonds

**2012+**
Definitive Feasibility Study on Main Pipe completed in August 2012

**H1 2014**
Raised project financing package for US$140 million and project debt facility of US$82.4 million

**April 2015**
US$15 million standby Absa Debt facility in place

Target production of 1 million carats per annum by Q4 2016

**LIQHOBONG MINE FLY THROUGH →**

an annual production of 3.6 million tonnes yielding in 1 million carats.

On October 2016, Firestone published an updated life of mine plan ("Mine Plan") and a Diamond Resource and Reserve update for the Project. The updated numbers were as a result of construction activities being 49% complete and a series of extensive work streams to further de-risk the project over the course of the last 12 months.

The definitive feasibility study announced in November 2013 ("2013 DFS"), indicated a base case post-tax, pre-financing NPV at an 8% discount rate of US$379 million and an IRR of 30%, with an upside potential post-tax, pre-financing NPV at an 8% discount rate of US$728 million and an IRR of 45%. The revised economics in October 2015 presented a higher base case post financing NPV at an 8% discount rate of US$389 million and an improved IRR of 42%. The Project has broadly similar economic returns when compared to the 2013 DFS, but with a significantly de-risked operational start up and delivery. The upside pricing option previously run at US$156 per carat has not been updated to 2015 estimates as the Company remains conservative in its view on diamond pricing, when taking the current market conditions into account. However, the Company remains confident that the long-term supply and demand fundamentals for the diamond industry remain robust.

The new Diamond Resource reflects a number of changes, which include a new geological model with reduced volumes at depth due to the pipe tapering, the removal of the boart carats, as the Company is focusing on gem diamonds, an increase in the BCO to 1.25mm from 1mm, to align to the new treatment plant's BCO which was determined as being optimal during the 2013 DFS, and depletions as a result of the pilot plant production which was closed in 2013. These changes have had the effect of reducing the overall Diamond Resource grade from 33 to 28 carats per hundred tonnes ("cpht") and the total Diamond Resource carats from 29.7 to 23 million carats ("mct"). As a result the undiluted Mine Plan grade has reduced from 32 cpht to 27 cpht, thereby resulting in a 17% reduction in the overall carats recovered over the Mine Plan, which is partially offset by an increase in the diamond price as described below. When combined with the reduced waste stripping associated with the new split shell mine design, the favourable Rand:US Dollar exchange rate and the changes to the modelled cash flow, the overall Rand revenue per tonne for the Mine Plan has improved.

The key operating and financial parameters modelled in the DFS are summarised as follows:

| Key assumptions | Unit | October 2015 | November 2013 DFS |
|---|---|---|---|
| Ore Mined | Mt | 52.1 | 53.7 |
| Average strip ratio | Waste/ ore | 2.0 | 2.28 |
| Plant Capacity | Mtpa | 3.6 | 3.6 |
| In situ grade | Cpht | 27 | 32.07 |
| Average annual production | Mcts pa | 1.0 | 1.15 |
| Mining cost | ZAR/ t mined | ? | 21.5 |
| Processing cost | ZAR/ t processed | ? | 57.8 |
| Site SG&A | ZAR/ t processed | ? | 12.5 |
| Steady state site operating expenses | US$/ ct | 53.3 | 46.9[1] |
| Royalty | % | 8% | 8% |
| Initial capital expenditure | ZAR Million | 2.088 | 1,854 |
| Initial capital expenditure | US$ Million | 185 | 185 |
| Operational cost | US$/ tonne | 14.5 | 15.1 |
| Operational cost | ZAR/ tonne | 192.1 | 151.0[1] |
| Average escalated diamond price | US$/ ct | 165[2] | 146[3] |
| Total carats | Mct | 14.2 | 17.1 |
| Life of open pit mine | Years | 15 | 15 |
| Payback period | Years | 4.1 | 4.6 |

[1] Operational cost has been adjusted to include costs previously allocated to stay in business capital.

[2] The average escalated diamond price applied in the model is based on the August 2014 diamond price estimate of US$131/ct (at BCO of

1.25mm), which has then been escalated from 2017 over the Mine Plan.

[3] The average escalated diamond price applied in the 2013 DFS was based on the diamond price estimate of US$107/ct (at BCO of 1mm), which was then escalated over the whole of the life of the mine plan.

| Project Model | 2013 DFS pre-financing | 2015 Mine Plan post-financing |
|---|---|---|
| Net Present Value @ 8% US$ | 379 | 389 |
| IRR | 30% | 42% |
| Revenue US$ per carat | 146 | 165 |
| Initial Capital cost ZAR[1] million | 1,854 | 2,088 |
| Exchange rate US$1:R | 10.00 | 13.27 |
| Payback period incl. construction | 56 months | 49 months |

**Planned development**

The construction program for the project commenced at the beginning of July 2014 whereby all major contractors were concluded and signed and the main contractors were mobilised to site to commence the initial infrastructure development.

On the 6 October 2015 the Company announced that the critical path were completed and civil, structural, mechanical and electrical construction works had begun. As at the end of September 2015, the Project was 49% complete against the revised schedule announced on 23 June 2015, of 50%.

The major critical path items that include the Residue Storage Facility ("RSF"), civils, accommodation and office complex, bulk power and the steel, mechanical, piping and platework erection and fabrication are all on, or close to schedule and within budget. The first steelwork had been assembled and the scheduled delivery of steel to site had commenced. The construction teams are also working hard to get ahead of schedule while there is a favourable weather window.

Overall engineering design was 90% complete, with only the final control and instrumentation interface designs outstanding, this work is progressing on schedule and within budget.

Accordingly, the Company is confident that, with the continued co-operation of the Government of Lesotho in granting the required specialist skills work permits necessary for the short term contractors, it currently remains on target to achieve initial production during Q4 2016.

Firestone is also pleased to report that the grid power project had been completed on budget and ahead of schedule and is undergoing the final commissioning phases having been connected to the national grid.

As at 31 August 2015, a total of approximately ZAR1.0 billion had been spent on the Project against a total Project budget of ZAR2.1 billion, which now includes a reallocation from future operating costs to project capital, and the Project remains within the original US$185.4 million budget and fully funded through to production ramp up. As at 31 August 2015, the Company had US$21.7 million cash on hand and undrawn facilities of US$92.4 million, being US$82.4 million pursuant to the Absa debt facility and US$10.0 million pursuant to the Eurobond facility, plus a US$15.0 million standby facility.